

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims

1. (Currently Amended) A method for processing input data comprising:
receiving multiple input rows to be loaded into a first structure, wherein the first structure is an output table;

processing each input row of the multiple input rows to classify each input row as one of an insert row and an update row, wherein input duplicates are appended to the first structure and index entries for the input duplicates are stored in a second structure, wherein an insert row is a row to be added to the first structure and an update row is an update to an existing row in the first structure, wherein input duplicates are duplicate input rows having a same primary key value, and wherein, of the input rows having the same primary key value, one is an original row; and

after the multiple input rows have been processed,
automatically re-applying the input duplicates to the first structure by removing the input duplicates from the first structure and applying the input duplicates to matching original rows in the first structure to update the matching original rows; and

merging ~~unique~~ index entries from the index entries stored in the second structure to a primary key index.

2. (Original) The method of claim 1, further comprising:
identifying duplicates in the index entries in the second structure; and
storing the identified duplicates in a third structure.
3. (Original) The method of claim 1, wherein the processing of the input data further comprises order insensitive processing of input duplicates.
4. (Original) The method of claim 1, wherein the processing of the input data further comprises order sensitive processing of input duplicates.

5. (Cancelled)

6. (Original) The method of claim 1, further comprising:
when an input duplicate is characterized as an update row, updating a corresponding row in the output table.

7. (Currently Amended) A method for processing input data, comprising:
loading one or more input rows into an output table, wherein input duplicates are appended to the output table, index entries for the input rows are stored in a first structure and discarded input rows are stored in a third structure, wherein the discarded input rows are input rows that are rejected based on a condition, wherein input duplicates are duplicate input rows having a same primary key value, and wherein, of the input rows having the same primary key value, one is an original row;

periodically interrupting the loading of the one or more input rows to perform an index merge, wherein input duplicates for which corresponding index entries in the first structure are not added to an index are stored in a second structure;

determining whether to add data for one or more discarded input rows in the third structure to the second structure;

when it is determined that the data for one or more discarded input rows in the third structure are to be added to the second structure, adding the data for the discarded input rows to the second structure; and

automatically reapplying input duplicates and discarded input rows for which data is stored in the second structure to the output table by removing the input duplicates from the output table and applying the input duplicates and the discarded input rows to matching original rows in the output table to update the matching original rows.

8. (Original) The method of claim 7, wherein determining whether to add the data for one or more discarded input rows in the third structure to the second structure further comprises:

searching for discarded input rows in the third structure with corresponding rows in the second structure and in the output table to identify potential input duplicates; and

applying conditions to the discarded input rows that are potential input duplicates.

9. (Cancelled)

10. (Original) The method of claim 7, wherein the processing of the input data further comprises at least one of order sensitive processing and order insensitive processing.

11. (Currently Amended) An article of manufacture comprising one of hardware logic implementing logic and a computer readable storage medium including a program for processing input data wherein the logic or program causes operations to be performed, the operations comprising:

receiving multiple input rows to be loaded into a first structure, wherein the first structure is an output table;

processing each input row of the multiple input rows to classify each input row as one of an insert row and an update row, wherein input duplicates are appended to the first structure and index entries for the input duplicates are stored in a second structure, wherein an insert row is a row to be added to the first structure and an update row is an update to an existing row in the first structure, wherein input duplicates are duplicate input rows having a same primary key value, and wherein, of the input rows having the same primary key value, one is an original row; and

after the multiple input rows have been processed,

automatically re-applying the input duplicates to the first structure by removing the input duplicates from the first structure and applying the input duplicates to matching original rows in the first structure to update the matching original rows; and

merging ~~unique~~ index entries from the index entries stored in the second structure to a primary key index.

12. (Original) The article of manufacture of claim 11, wherein the operations further comprise:

identifying duplicates in the index entries in the second structure; and

storing the identified duplicates in a third structure.

13. (Original) The article of manufacture of claim 11, wherein the operations for processing of the input data further comprise operations for order insensitive processing of input duplicates.

14. (Original) The article of manufacture of claim 11, wherein the operations for processing of the input data further comprise operations for order sensitive processing of input duplicates.

15. (Cancelled)

16. (Original) The article of manufacture of claim 11, wherein the operations further comprise:

when an input duplicate is characterized as an update row, updating a corresponding row in the output table.

17. (Currently Amended) An article of manufacture comprising one of hardware logic implementing logic and a computer readable storage medium including a program for processing input data, wherein the logic or program causes operations to be performed, the operations comprising:

loading one or more input rows into an output table, wherein input duplicates are appended to the output table, index entries for the input rows are stored in a first structure and discarded input rows are stored in a third structure, wherein the discarded input rows are input rows that are rejected based on a condition, wherein input duplicates are duplicate input rows having a same primary key value, and wherein, of the input rows having the same primary key value, one is an original row;

periodically interrupting the loading of the one or more input rows to perform an index merge, wherein input duplicates for which corresponding index entries in the first structure are not added to an index are stored in a second structure;

determining whether to add data for one or more discarded input rows in the third structure to the second structure;

when it is determined that the data for one or more discarded input rows in the third structure are to be added to the second structure, adding the data for the discarded input rows to the second structure; and

automatically reapplying input duplicates and discarded input rows for which data is stored in the second structure to the output table by removing the input duplicates from the output table and applying the input duplicates and the discarded input rows to matching original rows in the output table to update the matching original rows.

18. (Previously Presented) The article of manufacture of claim 17, wherein the operations for determining whether to add the data for one or more discarded input rows in the third structure to the second structure further comprise:

searching for discarded input rows in the third structure with corresponding rows in the second structure and in the output table to identify potential input duplicates; and

applying conditions to the discarded input rows that are potential input duplicates.

19. (Cancelled)

20. (Original) The article of manufacture of claim 18, wherein the operations for processing of the input data further comprise at least one of order sensitive processing and order insensitive processing.

21. (Currently Amended) A computer system having at least one program for processing input data comprising:

receiving multiple input rows to be loaded into a first structure, wherein the first structure is an output table;

processing each input row of the multiple input rows to classify each input row as one of an insert row and an update row, wherein input duplicates are appended to the first structure and index entries for the input duplicates are stored in a second structure, wherein an insert row is a row to be added to the first structure and an update row is an update to an existing row in the first structure, wherein input duplicates are duplicate input rows having a same primary key value, and wherein, of the input rows having the same primary key value, one is an original row; and

after the multiple input rows have been processed,
automatically re-applying the input duplicates to the first structure by removing the input duplicates from the first structure and applying the input duplicates to matching original rows in the first structure to update the matching original rows; and
merging ~~unique~~ index entries from the index entries stored in the second structure to a primary key index.

22. (Original) The computer system of claim 21, further comprising:
identifying duplicates in the index entries in the second structure; and
storing the identified duplicates in a third structure.

23. (Original) The computer system of claim 21, wherein the processing of the input data further comprises order insensitive processing of input duplicates.

24. (Original) The computer system of claim 21, wherein the processing of the input data further comprises order sensitive processing of input duplicates.

25. (Cancelled)

26. (Original) The computer system of claim 21, further comprising:
when an input duplicate is characterized as an update row, updating a corresponding row in the output table.

27. (Currently Amended) A computer system having at least one program for processing input data, comprising:

loading one or more input rows into an output table, wherein input duplicates are appended to the output table, index entries for the input rows are stored in a first structure and discarded input rows are stored in a third structure, wherein the discarded input rows are input rows that are rejected based on a condition, wherein input duplicates are duplicate input rows having a same primary key value, and wherein, of the input rows having the same primary key value, one is an original row;

periodically interrupting the loading of the one or more input rows to perform an index merge, wherein input duplicates for which corresponding index entries in the first structure are not added to an index are stored in a second structure;

determining whether to add data for one or more discarded input rows in the third structure to the second structure;

when it is determined that the data for one or more discarded input rows in the third structure are to be added to the second structure, adding the data for the discarded input rows to the second structure; and

automatically reapplying input duplicates and discarded input rows for which data is stored in the second structure to the output table by removing the input duplicates from the output table and applying the input duplicates and the discarded input rows to matching original rows in the output table to update the matching original rows.

28. (Original) The computer system of claim 27, wherein determining whether to add the data for one or more discarded input rows in the third structure to the second structure further comprises:

searching for discarded input rows in the third structure with corresponding rows in the second structure and in the output table to identify potential input duplicates; and

applying conditions to the discarded input rows that are potential input duplicates.

29. (Cancelled)

30. (Original) The computer system of claim 27, wherein the processing of the input data further comprises at least one of order sensitive processing and order insensitive processing.